

Notice of Allowability

Application No.

09/606,839

Applicant(s)

KARDACH, JAMES P.

Examiner

Thomas Lee

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Appeal Brief filed on 6/9/2006.
2. ☒ The allowed claim(s) is/are 1, 2, 3, 4, 5, 6, 7, 9, 11, 13, 14, 15, 20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20060823.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

THOMAS LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Art Unit: 2115

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Mark Watson on August 23, 2006.

In the Claims:

1. A method comprising:

receiving real-time analog data at a personal computer implementing a general purpose operating system;

converting the real-time analog data to digital data;

storing the digital data at a register;

receiving a timing signal at an event mechanism at a predetermined interval;

determining, by the event mechanism, whether data is stored within the register;

generating real-time interrupts indicating a request to process the real time data at a central processing unit (CPU) if data is stored in the register in response to receiving the timing signals;

determining whether a currently received real-time interrupt has a higher priority than a non-real time operation currently being processed at the CPU; and

processing the real-time data if the real-time interrupt has a higher priority than the non-real time operation.

Art Unit: 2115

7. A computer system comprising:

a chipset;

a bus coupled to the chipset; and

a central processing unit (CPU), coupled to the bus, to process data associated with a currently received real-time interrupt if the currently received real-time interrupt has a higher priority than a non-real-time operation currently being processed,

wherein said central processing unit further comprises a converter to convert received real-time analog data to digital data, a register to store the digital data, a timer to generate timing signals at predetermined time intervals, and an event mechanism coupled to the timer to generate real time interrupts if digital data is stored in the register in response to receiving the timing signals.

Cancel claim 8.

9. The computer system of claim 7 wherein the CPU further comprises an event handler coupled to the event mechanism to process the real-time interrupts.

Cancel claim 10.

Cancel claim 12.

13. A central processing unit (CPU) comprising:

a timer to generate timing signals at predetermined time intervals;

converter to convert received real-time analog data into digital data;

a register to store the digital data;

an event mechanism coupled to the timer and the register to generate real-time interrupts in response to receiving the timing signals and determining that real-time data is stored within the register; and

Art Unit: 2115

an event handler coupled to the event mechanism to process data associated with a real-time interrupt currently received from the event mechanism upon determining the relative priority between the currently received real-time interrupt and non-real-time operations currently being processed.

15. The CPU of claim 13 wherein the event handler determines the priority of the real-time interrupt relative to other interrupts received.

Cancel claim 16.

Cancel claim 17

Cancel claim 18

Cancel claim 19.

In summary: Allowed claims: 1, 2, 3, 4, 5, 6, 7, 9, 11, 13, 14 15, 20

Pursuant to MPEP 606.01, the title has been changed to :

-- SYSTEM FOR SELECTIVELY GENERATING REAL-TIME INTERRUPTS
AND SELECTIVELY PROCESSING ASSOCIATED DATA WHEN IT HAS HIGHER
PRIORITY THAN CURRENTLY EXECUTING NON-REAL-TIME OPERATION --

The following is an examiner's statement of reasons for allowance:

Shen et al, US 6,490,611, teach the usage of a non-real time operating system to run real time processes. Shen et al assign priority bands p1, p2, p3, and p4 to the processes where in $p1 > p2 > p3 > p4$ [col. 6, lines 42 – 45]. Specifically, Shen et al assign p1, p2 and p4 to real time processes [col. 8, lines 40 – 60] and p3 to non real time processes [col. 8, lines 60 – 61]. During the execution of the non-real time processes which having priority p3, the system will be interrupted to run a real time process only if the real time process has priority p1 or p2. If the real time process is having the priority of p4, the currently running non-real time process will not be interrupted [col. 9, lines 27 – 40].

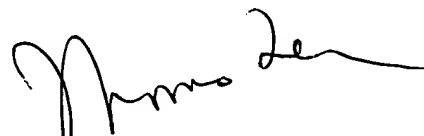
Art Unit: 2115

The prior art of record do not teach or suggest individually or in combination the generating of real-time interrupts in response to the receiving timing signals and digital data stored in a register and the determining of the priority between the currently received real-time interrupt and non-real-time operations currently being processed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Lee whose telephone number is (571)272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thomas Lee', with a stylized flourish at the end.

Thomas Lee

Primary Examiner